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NEW ENGLAND CONFERENCE ON EDUCATIONAL RESEARCH, FINAL REPORT.

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THIS EDUCATIONAL RESEARCH CONFERENCE FOCUSED ON (1) STIMULATING THE DEVELOPMENT OF NEW RESEARCH DIRECTIONS, DESIGNS, AND TECHNIQUES FOR 11 DIFFERENT FIELDS OF EDUCATION, (2) ASSESSING THE UTILIZATION OF RESEARCH SPONSORED BY THE COOPERATIVE RESEARCH PROGRAM (CRP) AND PARTICIPATION IN CRP, ESPECIALLY BY SMALL INSTITUTIONS OF HIGHER EDUCATION, AND (3) STIMULATING SCHOLARS TO FORMULATE AND IMPLEMENT RESEARCH PROJECTS WHICH BRING THE INSIGHTS AND RESEARCH METHODS OF THEIR DISCIPLINE TO BEAR UPON SELECTED EDUCATIONAL PROBLEMS. THE 11 ABSTRACTED PAPERS APPEARING IN THE REPORT WERE (1) OBESITY AND LACK OF FITNESS IN CHILDREN--THE NEED FOR RESEARCH, (2) NEEDED RESEARCH IN SCHOOL ADMINISTRATION, (3) WHEN CHILDREN ARE STUDYING, WHO IS "INDEPENDENT," (4) NEEDED RESEARCH IN VOCATIONAL EDUCATION, (5) RESEARCH IN EDUCATIONAL FACILITIES--AN ASSESSMENT AND SOME NEEDS, (6) THE RESEARCH RELEVANCE OF DESEGREGATION, (7) NEEDED RESEARCH IN AUDIOVISUAL EDUCATION, (8) NEEDED RESEARCH IN CRITICAL THINKING, (9) NEEDED RESEARCH IN ART EDUCATION, (10) RESEARCH IN TEACHER EDUCATION--STATUS AND POSSIBILITIES, AND (11) RESEARCH IN MUSIC EDUCATION. A SEPARATE ANALYSIS IN ABSTRACT FORM FOR EACH PRESENTATION IS INCLUDED IN THE APPENDIXES OF THE REPORT. (HB)

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FINAL REPORT

NEW ENGLAND CONFERENCE ON EDUCATIONAL RESEARCH

Cooperative Research Project No. F-045

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1. Problems on which research was focused.

Many institutions of higher education are not aware of the opportunities available for educational research and development under the Cooperative Research Program. In general, these are smaller institutions which lack a full-time director of research with responsibilities for keeping faculty informed about recent federal legislation.

In addition, several important areas of educational research have been underemphasized in both private and public research agencies. There is a definite need to inform academic personnel about the status of research in these fields, their research needs and possibilities, and about the policies and practices of the Cooperative Research Program as it affects or might affect research in these fields.

2. Objectives

The objectives of the conference were:

1. To stimulate in one geographical area the development of new research directions, designs, and techniques and to assess the status of educational research in vocational and industrial arts education, fine arts education, health and physical education, education of the culturally deprived, teacher education, school administration, educational media, critical thinking, independent study, educational facilities, and music education;

2. To assess the utilization of research sponsored by the Cooperative Research Program and participation in the Cooperative Research Program, especially by small institutions of higher education, and to provide improved means for such utilization and participation;

3. To stimulate scholars in economics, political science, philosophy, history, and other disciplines to formulate and implement research proposals which bring the insights and research methods of their disciplines to bear upon selected educational problems.

3. Related research

Because the conference concerned eleven different fields of educational research, it would not be feasible to include a summary of related research. Summaries pertaining to the individual presentations made at the conference can be secured by writing directly to the appropriate speaker on a conference topic.

4. Procedures

Under the chairmanship of Dr. Myron Lieberman, Dean of Professional Studies at Rhode Island College, 317 educators gathered at Rhode Island College on November 27-28, 1964, for two full days and an evening of conferences, discussions, and lectures by eminent authorities on various aspects of educational research. Personnel participating were as follows:

249	Institutions of higher education
36	School system personnel
15	State Department of Education personnel
10	Professional organizations
7	Private enterprise and miscellaneous
317	Total

Participants were enrolled from all states in New England and from New York. Both public and private institutions were represented in substantial numbers. No charge was made for attendance at any session of the conference.

The opening address was given by Dr. Glenn C. Boerrigter, Cooperative Research Branch, United States Office of Education. His topic was "Policies and Practices of the Cooperative Research Program." In his address, Dr. Boerrigter analyzed the flow of proposals to the Cooperative Research Program in the light of the policies and practices of the program. Questions from the audience elicited further information on ways and means to initiate and strengthen research proposals, clarified budgetary issues in drafting proposals, and suggested a number of techniques to resolve various problems in the field concerning Cooperative Research Program proposals.

At the luncheon meeting, Dr. Myron Lieberman discussed "Teacher Education Programs: Two Proposals." The main point of Dr. Lieberman's presentation was that groups of colleges and universities should join together in programs of teacher education much like groups of public school teachers

joined together in the BSCS, PSSC, SMSG, and other curriculum projects. Past and current research in teacher education was criticized as being founded upon an inadequate financial and statistical basis because of being conducted on an institution by institution basis.

The complete program was as follows:

Friday, November 27, 1964

10:00 a.m.	Registration and coffee hour, Donovan Dining Center
11:00 - 12:00 a.m.	Dr. Glenn C. Boerrigter, Coordinator, Cooperative Research Branch, United States Office of Education: "Policies and Practices of the Cooperative Research Program." Amos Assembly Room, Clarke Science.
12:00 - 2:00 p.m.	Lunch, Donovan Dining Center. Dr. Myron Lieberman, Professional Studies, Rhode Island College: "Teacher Education Programs: Two Proposals."
2:00 - 3:15 p.m.	Dr. Jean Mayer, Associate Professor of Nutrition, Harvard University: "Needed Research in Health and Physical Education." Amos Assembly Room, Clarke Science.
	Mr. Michael H. Moskow, Instructor in Economics, Lafayette College: "Needed Research in School Administration." Demonstration Room, Clarke Science.
	Miss Charlotte Levens, Principal, Salt Creek Elementary School, Elk Grove Village, Illinois: "Needed Research on Independent Study in Grades K-6." Room 118, Clarke Science.
3:30 - 4:45 p.m.	Dr. Lester Vander Werf, Dean of the College of Education, Northeastern University: "Needed Research in Vocational Education." Amos Assembly Room, Clarke Science.
	Dr. Cyril G. Sargent, Professor of Education, College of the City of New York: "Needed Research in Educational Facilities." Demonstration Room, Clarke Science.

Saturday, November 28, 1964

9:00 - 10:15 a.m.	Dr. Robert Ennis, Associate Professor of Education, Cornell University: "Needed Research on Critical Thinking." Amos Assembly Room, Clarke Science.
	Dr. Donald G. Arnstine, Associate Professor in the Department of Educational Policy Studies, University of Wisconsin: "Needed Research in Art Education." Demonstration Room, Clarke Science.

10:30 - 11:45 a.m. Dr. B. Othanel Smith, Professor of Education, University of Illinois: "Needed Research in Teacher Education." Amos Assembly Room, Clarke Science.

Dr. Robert A. Choate, Professor of Music, Boston University: "Needed Research in Music Education." Demonstration Room, Clarke Science.

Although the primary emphasis in the eleven main addresses was on needed research and each speaker cited specific areas for investigation, each also gave a comprehensive summary of research in the area being considered. In other words the addresses were not simple enumeration of topics in need of investigation. As the abstracts beginning on Page 9 show, the presentations provided a meaningful review of what has been done to date and of needed research in the field.

Comments and questions following each paper added data invaluable to conferees even though no attempt is made in this report to cover the material highlighted in these discussions. Every area listed was discussed in great detail from background, currently completed research, and the necessity of pursuing specific research problems in the area under consideration.

5. Analysis of the data and findings.

A separate analysis for each presentation is included in the appendices to this report.

The data concerning the value of this type of conference is quite positive although subjective. First, the large number of conferees from small colleges in the New England area indicate a strong need in the field for conferences of this nature. The supply of presentations in the different areas of research were depleted and subsequent requests had to be filled by a second printing in some cases. About fifteen commendatory letters were received; only one of a negative nature.

Two of the papers presented at the conference have been subsequently published:

Vander Werf, Lester S., "Needed Research in Vocational Education," Phi Delta Kappan, April, 1965, pp. 405-10.

Weinberg, Meyer, Needed Research on Education for the Culturally Deprived (Chicago: Integrated Education, 1965).

6. Conclusions and implications

The conclusions and implications for each area of educational research covered at the conference are included in the various appendices to this report.

Appendix A

Abstract

Jean Mayer, Harvard University

Obesity and Lack of Fitness in Children: The Need for Research

Although many studies have been made, there is need for exhaustive research in obesity among children. A table of deaths demonstrates that fatal diseases attributable in part to obesity, for example heart failure, are exceedingly more common than other causes and actually constitute about 50% more than expected deaths.

A seemingly typical survey in Newton, Massachusetts, revealed that obesity increased 20% in the past decade. Many syndromes produce obesity, but these principal factors can be identified: (1) permissive environment which makes available sufficient food to satisfy constitutional predisposition, (2) permissive environment which keeps physical labor to a minimum, (3) reduction of desire for physical activity as weight increases.

School buses, weak physical education programs, and lack of physically demanding chores are major causes of obesity. Usually food intake is over-rated, and inactivity is the key. Some non-obese students eat more than do the obese, but the latter are inactive, especially in winter when weight increases most.

Psychologically, obesity is destructive. The obese feel obsessively concerned about appearance. They share the so-called minority views of being persecuted, exhibit "passivity," and suffer withdrawal symptoms since they feel isolated and rejected by their peers. With their associates, even with their families, they are in the ambivalent position of dependency and tension. Unlike the non-obese, who enjoy more family unity and yet can separate from their families easily, the obese do not ordinarily experience family unity, and yet they have much greater difficulty separating from their families.

Psychologically the obese undergo consciousness of inferiority. They know obesity is undesirable, and they blame their obesity for all their reverses. This certainly is minority-group thinking. They show contempt for fat people and admiration for thin people.

Research in needed to provide a better definition of body types and their relation to physical fitness. Obesity is not randomly distributed. Usually the obese are solidy built and need not be fat. Also needed are better definitions for various types of work and experience, better tests and measurements of both baselines and achievements in the course of training, and finally, if obesity is not to increase alarmingly, research must provide means of motivation of children and subjects on which efforts can be concentrated.

No one is more important than the therapist, and the therapist must act wisely or passivity, withdrawal, and inactivity will increase. The therapist must know the individual patient, and he must be aware of both the psychological and the physical aspects of obesity. Otherwise, the patient will be consumed with self-blame, and the danger of harmful weight-reducing programs will be increased.

Appendix B

Abstract

Michael H. Moskow, Lafayette College

Needed Research in School Administration

Since 1919 two rival public school teacher organizations have been engaged in increasing bitter competition to represent teachers. In 1961 the United Federation of Teachers, an affiliate of the American Federation of Teachers, made a vast advance when it was elected bargaining agent for New York City's teachers. Later, the UFT became affiliated with the Industrial Union Department of the AFL-CIO. At the present time, the National Education Association has about 900,000 members, mostly teachers but also administrators, college personnel, and education specialists. Public school classroom teachers constitute about 85% of the NEA's membership. The AFT has 100,000 members, largely concentrated in large cities and virtually all classroom teachers.

Although differing in some ways, the two organizations are similar in goals. They take the same side on some issues. Their differences concerning collective negotiations are largely semantic, with the AFT supporting "collective bargaining" and the NEA "professional negotiations."

The NEA advocates a modified form of arbitration in disputes between teachers and school boards, but it objects to use of state labor relations agencies to resolve impasse situations. An other issues, the two organizations are closer than is commonly supposed.

Whatever the dispute between teachers and school boards, administrators are bound to be affected and even deeply involved. A superintendent usually is appointed by a school board and should conduct negotiations for it.

Administration members can dominate teachers organizations, and when such domination is resented, administrators are likely to regard allegations of domination as a personal affront. Ways can and should be found to resolve this problem.

At the same time, representatives of teachers must keep in mind that 46% of school boards have no fiscal independence.

So much has been written on the legal aspects of collective negotiations that attention now should be turned to ways of improving the process of collective negotiations. For instance, although exclusive recognition is accepted as the best system of employee representation in private employment, is public education so different that another representational system might be equally effective? What safeguards are needed to guarantee teachers their right of self-determination and complete freedom of choice concerning an organizational representative for negotiations? Can a teachers organization be effective with administrators members, and if administrators are admitted, what safeguards, if any, are needed against their domination? Can teachers and administrators be represented by a single agency? Can state boards of education and state superintendents be regarded as sufficiently objective to settle disputes? How can a third party be most effectively used in impasse situations in education?

These major problems are virtually uninvestigated. They do not have the glamor of "individual" cases, but they are at the heart of much more important and much more pervasive matters.

Appendix C

Abstract

Charlotte R. Levens, Salt Creek School, Elk Grove Village, Illinois

When Children are Studying, Who is "Independent"?

This paper asks for research into the meaning, the value, and the significance of "independence," which is regarded as a highly desirable quality. Nevertheless, the term is relative and can be interpreted in different ways, depending on definitions and conditions.

For example, day-dreaming can be regarded as dependent if it is used for escape, but it can be independent if indicative of a student's doing something for himself. An act can be characterized as "dependent" or "independent" only in relation to a specific set of conditions.

"Independence" is a term often applied to individual achievement by a student, apart from assistance by a teacher. Learning to act like an adult also is a mark of student independence.

The value of independent study, team teaching, and similar programs has not been overwhelmingly justified by achievement test results. Some believe the value lies in "intangibles," but if independence is such, it occupies at best an ambiguous status, and one hardly justifiable in today's practical world.

Giving a child independence is not enough. Research must show ways in which he can use it. If students are to be educated to be independent, knowing when to guide and when to tell is crucial. Certainly, research is needed to indicate guidance and telling by the teacher who must supervise the process of making students independent.

Simply stated, independence implies a greater orientation to the discipline at hand and less to the authority of the teacher. However much research is needed to clarify the conditions of effective independent study and the appropriate roles for guidance and for telling students what to do in given situations.

Surely, here is a problem and a real target for research.

Occupational changes are amazing. In the total labor force from 1900 to a projected 1975, the changes are as follows: white collar workers from 17.6 to 47.0% blue collar workers from 35.8 to 33.4 service workers from 9% to 14.3% and farm workers from 36.6% to 4.5% of the total labor force.

The need for occupational education is clear from the percentage increases in the various occupational categories needed; professional and technical--65%; managers and proprietors, 32%; clerical, 45%; service, 51%; sales, 34%; skilled, 30%; semi-skilled, 18%; laborers (not farm or mine) none. Actually, farm jobs are declining at the rate of 250,000 a year, and only one youth in 10 now on a farm will find work on a commercially successful farm in 1970.

So little has been done in this area that anything will be welcome, but some suggestions can be made. Critically needed are follow-up studies of graduates to evaluate effectiveness of programs; studies of ways to harmonize the work of federal, state, and local agencies; studies of multi-purpose as contrasted with single pupose vocational schools; and studies of teachers from standpoint of breadth and specialization in preparation. Also, there should be studies of how to give prestige to vocational programs which have been stigmatized for a long time.

Appendix D

Abstract

Lester S. Vander Werf, Northeastern University

Needed Research in Vocational Education

In this era of reappraisal of almost everything educational, one has only to glance at unemployment statistics to see the need for basic research into the problem of preparation of young people for occupations. Unfortunately, so-calle vocational education labors under some handicaps; for example, even the name brings to mind the biases, if not prejudices, besetting the area and making it less attractive as an object of research. Perhaps there should be a reappraisal of nomenclature and the area should more properly be called occupational education.

Since this type of education began, it has labored under special difficulties, not the least of which has been its categorization as an inferior kind of education. Even today, despite the need for trained workers, only 2% of 12,000,000 American secondary students are enrolled in the vocational trades and industry division. Certaily, research is needed to make occupational courses more attractive and productive.

Research must be based on need, and the need in this area is well dramatized in readily available figures. For example, 35% of high school students drop out, 45% never enroll in anything higher than high school, and 40% of college students quit. Research might well establish that many students were not in the right program, hence should not be regarded as "drop-outs," but as "push-outs."

Further, 20% of youth under 21 are unemployed, with the rate steadily increasing. One million of these who left school before age 21 are jobless, including 30 % of the "drop=outs" and 15% of high school graduates. Only one person in ten without a bachelor's degree has specific occupational preparation.

Appendix E

Abstract

Dr. Cyril G. Sargent, College of the City of New York

Research in Educational Facilities; An Assessment and Some Needs

Because of the demand for more money for teachers salaries, two facts are clear: first, the topic of school facilities lies outside the main interest in education and, secondly, intensive studies are needed to ensure that maximum value is received for the dwindling supply of dollars available for educational facilities. With enrollments increasing tremendously, ways must be found to produce greater and more usable space with less money. The acuteness of this problem becomes clear when one realizes that school building is second only to housing in the national construction picture. To get what is needed requires specific, detailed data.

If the financial aspects could be disregarded, the problem would be simple. Needs could be determined and cost calculated with utmost simplicity: multiply the square footage by the cost per square foot under the formula, area times quality.

Vast gains have been made. Research under the School Construction Systems. Development has yielded reductions of $1.50 per square foot in building costs. Although Congress rejected a proposal for $3.5 million dollars for joint research with industry into building construction, there is hope that 5 million may be made available for this purpose. It is significant from the cost standpoint that only apartment buildings and religious institutions had smaller increases for construction than schools.

Specific research needed is in these areas: (1) overall institutional development, (2) individual elements such as classrooms, library, auditoriums, (3) environment, including light, sound, and thermal conditions. The value of using computers in these areas is reflected by the fact that one college has already saved $3,000,000 and may eventually save another $7,000,000 by such use.

The cost of the computer use first phase of the research was $15,000. The computers were used under GASP (Generalized Academic Simulation Programs). GASP produced schedules drastically reduce costs and increase efficiency.

Research concerning teaching space is needed especially. Flexibility of programs and varieties of groupings force major changes in architecture which remained stationary and sterile from 1920 to World War II. Space must be designed for multiple use, libraries must be mechanized and automated, and the whole concept of a school completed altered to meet demands. To accomplish the goal in the light of dwindling funds, research is vital. Certainly, methods must be found of increasing use of expensive laboratories.

Research is concerned with the future. In schools, the future typically means heavier emphasis on salaries and a view of facilities as a necessary but unproductive form of expenditures. These expenditures must not only be justified they must be made compellingly desirable. Only by research can justification and desirability be demonstrated. Benjamin Handler of the University of Michigan says that human requirements have received less attention than other kinds of building research. He sees this situation as a result of concern for technology, efficiency, and economy, but he argues strongly for research which attempt to find out "not only what present buildings do do, but more important, what buildings should do for their users." Here is the demand for research in educational facilities.

Appendix F

Abstract

Meyer Weinberg, Editor, Integrated Education:

The Research Relevance of Desegregation

This paper draws together the principal elements of research into classroom desegregation through studies of specific schools and cities. Desegregation, abolition of social practices which bar equal access to opportunity, is a step away from segregation, which is a socially-patterned separation of people but it is only a step towards integration, which is the realization of equal opportunity by deliberate cooperation and without regard to racial or other social barriers.

In 1960, only two of 11 superintendents in a study into desegregation noted a lowering of academic standards through the process. All noted an initial Negro student lag but a subsequent improvement. In a survey of forty systems, only two found the program handicapped by admission of Negroes into formerly all white schools.

An intensive survey in New York showed children in integrated schools significantly superior in achievement in respect to verbal ability, reasoning, and other areas and a tendency towards levels of achievement similar to those for white students. In a survey of 1,254 pupils in Jackson, Michigan, it was found that the mean I.Q. of Negro pupils increased 6.88 points while that of the whites advanced only 1.87 It was further found that Negroes lag in early years but advance significantly later when placed into desegregated schools. Other studies show that Negro achievement in integrated shcools is more accelerated than that of whites.

One study indicated that white prejudice against Negroes increased as Negro-white achievement became more equal. A growing dissatisfaction with their status is inspiring Negro students to new heights, and parents of Negro children are seeking the best education for them.

Desegregation has an effect on Negro teachers. Many lost positions, and in some communities they were given only non-teaching positions, such as librarians. Recruiting of white teachers for desegregated wchools also present a problem. Except for a very few cases, desegregated classes were taught by white teachers.

In the past, much of the research has been concerned with the psychological, legal, political and public opinion aspects of desegregation. Now the accumulating body of research concerned with classroom aspects of school desegregation must be supplemented and amplified.

Since segregation is a socially-patterned withholding of opportunity from selected groups of persons, research is needed on desegregation and integration as one dimension of the problem of educational deprivation. Few have studied this area, and research on education of the deprived child is less realistic than it should be. Very little has been contributed to research on the relevance of desegregation by sociologists, social psychologists, anthropologists, and political scientists. Indeed, the literature of these fields reflects an assumption that little or no research on desegregation has occurred since the preparation of the social scientists' brief in the segregation cases culminating in the Supreme Court decisions in 1954.

Desegregation to date has been largely token. The basic pattern of desegregation remains. Research into the effects of large-scale desegregation is desparately needed. Simple desegration is not enough since it merely brings racial groups together. What is needed and what can be developed through research is "quality integrated education." Only thus can equal but poor quality education be avoided.

Research on a large scale might well confirm what has been found in limited studies: (1) desegregation has led to significant increases in Negro academic achievement without harm to white students, (2) Negro students do not have lower aspiratimns that white students, (3) interracial friendships can be formed, (4) the psychological cost of desegregation to the Negro is compensated

for by expansion of opportunity, (5) obstacles to employment of Negro teachers can be overcome, and (6) heterogeneous classrooms, embracing racial integration and wide ability differences, are consistent with satisfactory academic progress.

Appendix G

Abstract

Loran C. Twyford Jr., Chief, Bureau of Classroom Communication

New York State Department of Education

Needed Research in Audio-Visual Education

Modern research in audio-visual education suffers from four major defects:

1. Research follows old patterns.

2. Research is not concerned with important elements.

3. Research is repetitive and impractical.

4. Much of the research is done, not because anyone is really inspired, but rather because money is available.

Major objectives in research should be total teaching and enrichment.

1. Teaching. The public and public school boards see television, filmed courses, and programmed instruction simple as a means of proving quality education at low cost. Research is needed to determine whether such education results and whether it is really economical. There is some question about both aspects and no convincing answers as yet.

2. Enrichment. Films are used in almost every classroom, and there are increased uses of other aids, such as language laboratories, maps, and overhead transparencies. It is doubtful that enrichment use has the potential for radically improving instruction.

The repetitive, opportunistic, and impractical character of research in audio-visual education is regrettable. More than 200 studies have been made of the efficacy of television instruction. Pre-occupation with insignificant statistics and design have taken more research time that could be better spent on major problems, such as improvement of quality and increase in the amount of education. If audio-visual aids can be shown to help, a gain is made.

Unlike today's researchers, who often are general educators or statisticians, tomorrow's should experts. Pilot studies should precede general studies.

Key problems must be investigated, for example, whether students retain what they learn, not how much they have been exposed to. In this matter, research should be undertaken to measure learning in process, not merely how much is retained by the end of the semester.

Future research should be directed into more useful channels. Effectiveness is only one element. Incidentally students should not know that research is under way.

Research into the area of audio-visual aids cannot be isolated. It fits into the general pattern of education, and the research should consider the end goals of education.

Appendix H

Abstract

Robert H. Ennis, Cornell University

Needed Research in Critical Thinking

Critical thinking, which obviously should be a vital phase of the education of everyone, lacks extensive research. While publications carry many articles on what particular teachers are doing in the area of critical thinking, the teachers involved seem to be acting on intuition, hardly an example of the very process which is supposedly being taught. Some operations by experienced teachers reflect insight, but often they are vague and based on vaive notions of critical thinking.

Generally, the approach to improvement of thinking on the part of students is haphazard; hence there is need to develop critical thinking tests, discover children's developmental patterns, and determine which subject matter areas are particularly suited to different aspects of critical thinking. Also needed are useful theory, successful methods and principles of teaching, and suitable curriculum patterns. Each of these areas is wide open to research, and success in teaching critical thinking may well depend upon the research done on these matters.

Although there has been some research, considerable disagreement has developed on the whole subject of teaching critical thinking. Differences concern developmental patterns, generalizations, deduction, process, and every other topic related to the main subject. In value as well as extent, research has been minimal.

For the sake of thinking about research, one may define critical thinking as "correctly assessing statements." What is needed immediately is a p possible refining of this definition, development of critical thinking tests, discovery of children's developmental patterns in the aspects of critical thinking, discovering the learning capabilities of children, determining what subject matter areas are especially suited to different aspects of critical thinking, content of instruction,

Research in needed concerning teacher behavior which encourages student initiative, constructive activities, positive attitudes towards school work, and the like. This research should have two dimensions: affective and cognitive. The affective relates to the way in which students are dealt with, and the cognitive relates to the way in which the content of instruction is handled. Studies of the cognitive aspect are more limited in number and less sophisticate than studies of affextive teaching behavior, but they are at least as important and as needed.

Since the preponderance of teaching behavior is verbal, analyses of classroom discourse should yield invaluable data and conclusions. Such findings could improve teaching by indicating to teachers when, what, and how they should talk.

"In order to develop a defensible program of teacher education we need extensive studies of teaching from the standpoint of what combinations of behavior are most conducive to learning in the cognitive as well as in the affective domain." The pressing task of the researcher today is "the expansion of the content of teacher education together with its selection and formulation into a program of instruction."

Appendix I

Abstract

Donald Arnstine, University of Wisconsin

Needed Research in Art Education

To do useful research, one must be aware of what has been done and what has been wrong with previous studies. The principal fault with research in art education probably is that researchers have not made clear the purpose of answering the questions they raise. Art is quite concrete, and "pure" research will not provide the practical use value which should be sought. Answers are of value only insofar as they help conduct an enterprise in a better way. The answers must be found in objective, empirical research.

A major fault is the attempt to make art therapeutic. Attempts to classify youngsters therapeutically on the basis of art leads to dangerous generalizations. Thus characteristics of drawings by stutterers and non-stutterers or other contrasting types form the basis for judging personality structure. Unfortunately for such therapy advocates, children are of almost infinite variety.

Such studies are not research in art education at all; they are research into personality, mental health, emotional adjustment, and art therapy. No doubt it is difficult to get a place for a seemingly impractical subject, and researchers try to make art a practical answer to questions related to therapy. Psychologists should do the research into personality and aesthetic experience. Researchers in art should inquire into conditions which enable learners to acquire new attitudes and knowledge about art and aesthetic experience. It may be valuable to find out how to produce better draughtsmen and painters, but realistically there is more sense in finding out how to make people enjoy art more and understand it better.

One obstacle to research, of course, is that there is a phase of art which is not objective and empirical; that is, the researcher starts with his

own definition, as does the author here. Art is best described as that which causes an aesthetic experience, and an aesthetic experience is something complete in itself, not needing anything beyond, such as a feeling one might have when he meets an old friend. In other words, art is terminal and independent of practical considerations.

Research must be designed to show that values transcend the practical. Today's heavy emphasis on utility causes complications. Indeed, recent emphasis of cognitive learning, testing, and rigorous standards has caused some teachers of art to be too rigorous and exacting. Freedom and relaxation are vital to art. Research must reveal ways of initiating activities to present works of art in such a way that they are immediately and terminally valuable and at the same time have the potential of raising and refining the level of artistic creativity and aesthetic enjoyment.

Research certainly should be made into the kinds of experiences which children are capable on apprehending terminally. Otherwise, children will be bored with the too familiar or frustrated by the too complex.

So with chuldren's reactions to art: instead of simply learning which works are preferred by children, studies should be made into the kinds of discriminations of thich they are capable.

Another type of research might focus on the comparison of carefully controlled differences in methods of teaching with objectives held relatively constant.

Research could well be conducted into backgrounds of children's preferences in clothing, automobiles, recordings, etc., to show the extent to which aesthetic values have been confused with or even debased by extrinsic considerations.

Appendix J

Abstract

B. Othanel Smith, University of Illinois

Research in Teacher Education: Status and Possibilities

During the past twenty years there has been a vast increase in expenditures for programs and research in teacher education, but research findings are few. Now, however, marked progress can be made, fruitful questions can be asked, research directed to profitable channels, and training programs developed adequately on the basis of fundamentals studies of teaching behavior. Research here is concerned with pre-service training of teachers, not with those who have taught.

To date, researchers have been concerned primarily with these questions:

(1) What are present practices in teacher education, what objectives are u. used in shaping programs of teacher education, and how are these programs organized and administered? Research so far involves little criticism and makes few suggestions concerning new directions in which to move.

(2) What factors of past experience, schooling, and personality are associated with success in teaching?

(3) Many researchers have attempted to make comparative studies of the effects of various ways of training teachers. These studies seek to determine whether one way of dealing with content and students is more effective than other methods in modifying behavior of teachers.

Unfortunately, most research has been concerned with variables which either have a remote relation to teaching behavior or none. Instead of being excessively concerned with the personality of the teacher, as has been the case too often, extensive and intensive research is needed to indicate effects of different ways of dealing with subject matter and children. Just as brusqueness and eccentricities can be tolerated in an effective doctor, so can characteristics of a teacher be independent of how a teacher deals with students and handles

and finding successful methods and principles of teaching and suitable curriculum patterns.

Tests specific to various fields are needed; for example, a test in evaluation of evidence and authorities in history. Studies should be made into developmental patterns. When do abilities appear? Do they develop slowly or full-bloom? A survey could well be made of common deductive thinking and mistakes made in everyday life. A list of criteria or rules for judging whether mistakes had been made could be compiled. There is a need to determine how much critical thinking children can learn and where in the curriculum critical thinking should be placed.

Research must determine which subjects lend themselves best to critical thinking, e.g., mathematics lends itself to deduction rather than to judging the reliabity of evidence. Evidence must be found concerning which aspects of critical thinking are closest to which subjects and even whether critical thinking is suitable to direct instruction.

Other topics needing research are: Should the principles of critical thinking be made explicit at some point in instruction? Should the teacher supply these principles as soon as they can be understood? How effective is the question "Why?" in critical thinking? Does the size of the group affect the effectiveness of teaching critical thinking? Is critical thinking instruction likely to transfer? Which subjects are best adapted to which aspects of critical thinking? Is problem solving a better approach to critical thinking than the conventional subject matter approach?

Appendix K

Abstract

Robert A. Choate, Boston University

Research in Music Education

The objective of teaching music is the education of children in and through music. For this purpose, it is essential that all pertinent information be available. Nevertheless, only in the middle 1920's was research in a contemporary sense launched, and then only because of broadened concepts of education, expanding music programs, and degree requirements necessitated by the establishment of graduate programs.

Since then, there have been 4500 masters' theses and 1000 doctoral dissertations on music education, and hundreds of colleges give degrees in music. Nevertheless, research is minimal though vitally needed. One important study being made is by Cady and Schneider under a grant by the U.S. Office of Education. It will cover the period from 1930 to 1962 and seek to evaluate, synthesize findings, and indicate implications for current practices and further investigations in music education. Although some surveys have been made, the principal sources for completed research are the two Larson bibliographies and the Gordon compilation of doctoral dissertations in music and music education from 1956 to 1963.

Funds for research are available. Research is seriously needed in (1) historical aspects, (2) philosophical inquiry, (3) curriculum content, and (4) processes in music teaching.

1. Historical aspects Since music has been inextricably enmeshed in the educational, social, and cultural life of the nation, a full perceptive description and documentation should be made of music education in the United States. It is a story of musicians, educators, communities, industrial institutions, and organizations concerned with the quality of the life of the nation. Such study is urgently needed, and opportunities to make it are abundant. Major gaps now

exist in the history of music instruction.

2. Philosophical inquiry--Two areas are in particular need of research: phi philosophies of education and aesthetics. This area is worthy of study, since beliefs, attitudes, and values held determine (a) whether music shall be taught and given adequate financial support, (b) what the role and function of music education should be, (c) whether music education is essential or ornamental, (d) what shall be taught, e.g., only great music or a wide range of compositions, and (e) how music shall be taught.

3. Curriculum content. Too many invalid generalizations characterize discussion of curriculum content, and research should reveal more valid ones. Since music is an appropriate study from kindergarten through the university, it is essential that the curriculum be sound. Nor is music for performers only. It is linked to the humanities and has great potentialities in new interdisciplinary programs. Curriculum is an important problem also in the preparation of music teachers and supervisory personnel. Criteria for selection of curriculum must come from research.

4. Process in music teaching. These are concerned primarily with aids for improvement of instruction, and herein music is not different from any other subject. These aids are of two kinds: (a) organizational structures for music learnings and (b) instructional aids for facilitation of the learning processes.

Appendix L

Director of Project F-045

The project director was Dr. Myron Lieberman, Assistant Dean for Professional Studies, Rhode Island College. Dr. Lieberman's experience and qualifications include:

1. Coordinator of Faculty Research, Rhode Island College, 1963-64
2. Director of Basic Research, Educational Research Council of Greater Cleveland, 1959-60. The Educational Research Council of Greater Cleveland is a nonprofit organization devoted to educational research.
3. Service as head of the division of education in two institutions of higher education (Yeshiva University and Rhode Island College), and as a professor of education at the University of Oklahoma and Hofstra University.
4. Teacher at a university laboratory school: University High School, University of Illinois, Urbana, Illinois, 1952-53.
5. Research Analyst, Was Department, Civil Intelligence Section GHQ, Tokyo, Japan, 1946-48.
6. Author or co-author of 4 books, 2 monographs, and over 25 articles dealing with a wide varity of educational problems, including the problems of supporting, stimulating, disseminating, and using educational research. For examples, see "The Need for a 'Research-Minded' Profession" in Education as a Profession (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1956), pp. 192-95; and The Future of Public Education (Chicago: University of Chicago Press, 1960), pp 41-45, 279-80.